CLAIMS

What is claimed is:

1. A method of controlling fuel delivery in an engine after adding an unknown fuel to a fuel tank, comprising:

controlling a fuel rate of a first set of engine cylinders according to a first fueling scheme; and

controlling a fuel rate of a second set of engine cylinders according to a second fueling scheme.

2. The method of claim 1 wherein the first fueling scheme assumes a first fuel type was added to the tank and the second fueling scheme assumes a second fuel type was added to the tank.

3. The method of claim 2 wherein the first fuel type is E85 fuel and the second fuel type is E0 fuel.

4. The method of claim 1 wherein the first and second fueling schemes determine at least one of an air/fuel ratio, fuel flow rate, and spark timing.

5. The method of claim 1 further comprising determining the first and second fueling schemes based on a fueling map.

6. The method of claim 5 further comprising calculating the fueling map at a controller.

7. The method of claim 6 wherein calculating the fueling map includes calculating the fueling map according to at least one of a previous fuel alcohol percentage, a previous fuel volume, and a new fuel volume.

8. A method of controlling fuel delivery in an engine after adding an unknown fuel to a fuel tank comprising:

controlling a fuel rate of a first set of engine cylinders according to a first fueling scheme;

controlling a fuel rate of a second set of engine cylinders according to a second fueling scheme;

determining if exhaust from the first and second sets has an abnormal oxygen level at an oxygen sensor;

adjusting the fuel rate of at least one of the first and second sets to correct the abnormal oxygen level.

9. The method of claim 8 wherein the abnormal oxygen level indicates at least one of a lean condition and a rich condition.

10. The method of claim 9 wherein the first fueling scheme assumes a first fuel type was added to the tank and the second fueling scheme assumes a second fuel type was added to the tank.

11. The method of claim 10 wherein the first fuel type is E85 fuel and the second fuel type is E0 fuel.

12. The method of claim 11 wherein adjusting the fuel rate includes decreasing the fuel rate of the first set if the abnormal oxygen level indicates a rich condition.

13. The method of claim 12 wherein adjusting the fuel rate includes increasing the fuel rate of the second set if the abnormal oxygen level indicates a lean condition.

14. The method of claim 13 wherein adjusting the fuel rate includes adjusting the fuel rate until the fuel rate of the first set is within a threshold of the fuel rate of the second set.

15. A method of controlling fuel delivery in an engine after adding an unknown fuel to a fuel tank comprising:

controlling a fuel rate of a first set of engine cylinders according to a first fueling scheme;

controlling a fuel rate of a second set of engine cylinders according to a second fueling scheme;

determining if exhaust from the first set has an abnormal oxygen level at a first oxygen sensor;

determining if exhaust from the second set has an abnormal oxygen level at a second oxygen sensor;

adjusting the fuel rate of at least one of the first and second sets to correct the abnormal oxygen level.

16. The method of claim 15 wherein the first fueling scheme assumes a first fuel type was added to the tank and the second fueling scheme assumes a second fuel type was added to the tank.

17. The method of claim 16 wherein the first fuel type is E85 fuel and the second fuel type is E0 fuel.